Open-Loop Government

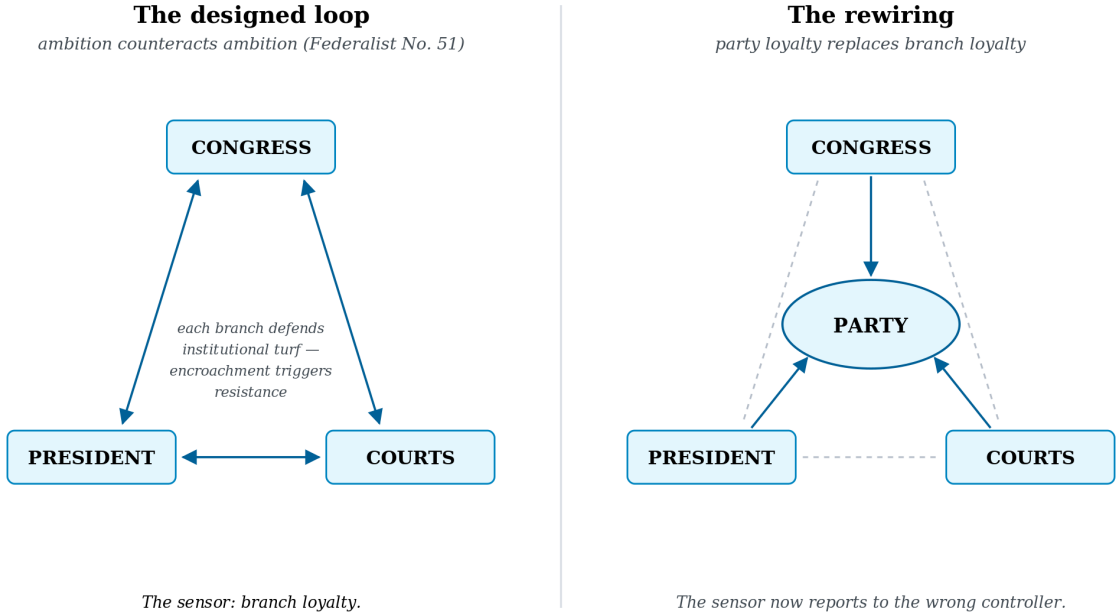
A Stellaris Meta-Framework essay

American government runs open-loop. Most federal institutions receive a mission statement at birth, then drift until a crisis forces external correction. No sensor measures the drift. No reference value defines success. No actuator applies correction before the failure becomes an emergency. The founders built the design this way because closed-loop government was impossible in 1787. The extraction economy preserved the design because blindness pays. The abundance economy can end the design, because the binding constraint on feedback shifted — for the first time in constitutional history — from physics to political will.

Madison's Two Loops

James Madison designed one feedback loop and assumed a second. The designed loop appears in Federalist No. 51: ambition counteracts ambition. Each branch defends institutional turf, so encroachment triggers resistance. The assumed loop lived beneath the design. Members of Congress identify with Congress. Presidents identify with the presidency. Judges identify with the courts.

The assumption failed. Party loyalty replaced branch loyalty, so feedback now runs through party networks rather than institutional ones. A senator no longer resists a president of his own party who seizes congressional power — he cheers. The sensor Madison installed reports to the wrong controller. That single rewiring explains more of the current constitutional moment than any doctrinal shift does.



The sensor: branch loyalty.

The sensor now reports to the wrong controller.

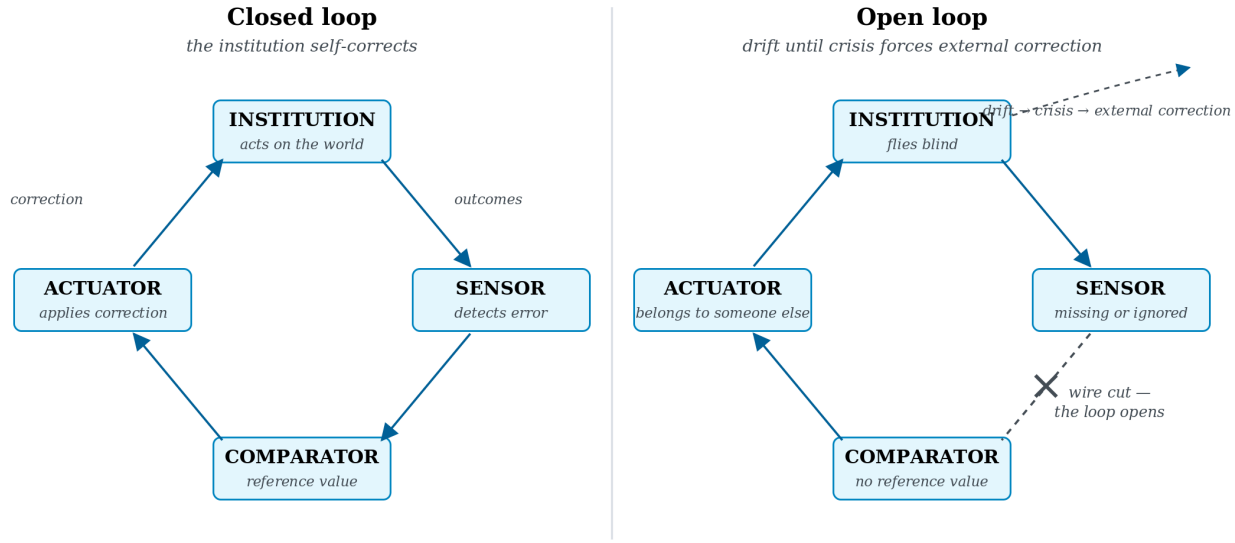
Madison designed the first loop and assumed the second. The assumption failed.

The Anatomy of a Feedback Loop

A feedback loop needs three components. A sensor detects error. A comparator holds a reference value. An actuator applies correction. Remove any one component and the loop opens — the institution flies blind until something outside the institution intervenes.

Run the federal government through that test. Executive agencies carry sensors: inspectors general, GAO audits, statistical programs. But the actuator belongs to someone else — the president through removal power, the courts through judicial review, Congress through appropriations. An agency cannot self-correct against the will of the agency's own principal. The federal judiciary below the Supreme Court runs a clean loop through appellate reversal, but the Supreme Court sits at the top with no error-correction mechanism at all. Lifetime tenure deliberately severs feedback. That severance buys independence and costs correction; the design accepts drift as the price of insulation. Elections supply the master loop, but elections transmit roughly one bit every two years, bundled across hundreds of issues. A low-bandwidth channel cannot correct a high-dimensional system.

One institution passes the test: the Federal Reserve. Congress gave the Fed measurable reference values — price stability, maximum employment — plus fast sensors reading market data daily and an actuator the Fed controls directly through rates and the balance sheet. Consequences arrive within quarters and attach to identifiable decisions. Almost no other federal institution meets that specification.



Remove any one component and the loop opens.

How the Extraction Economy Kept the Loops Open

Open-loop government predates the extraction economy. The 1787 design ran open-loop out of necessity: information moved at horse speed, no statistics profession existed, and the federal government could not measure national outcomes even if the founders wanted measurement.

Sensing technology capped loop speed. The founders did not choose blindness. Physics chose blindness for them.

The extraction economy's contribution came later and differed in kind. Extraction interests found the open loops profitable and worked to keep the loops open. Regulatory capture operates a feedback loop that works perfectly — for the regulated industry. Congress starved statistical agencies while the questions those agencies measured grew more consequential. And when Congress built a rare closed loop, courts cut the wire: the Voting Rights Act preclearance formula tied a sensor directly to an actuator and self-executed for five decades, until *Shelby County v. Holder* severed the connection in 2013.

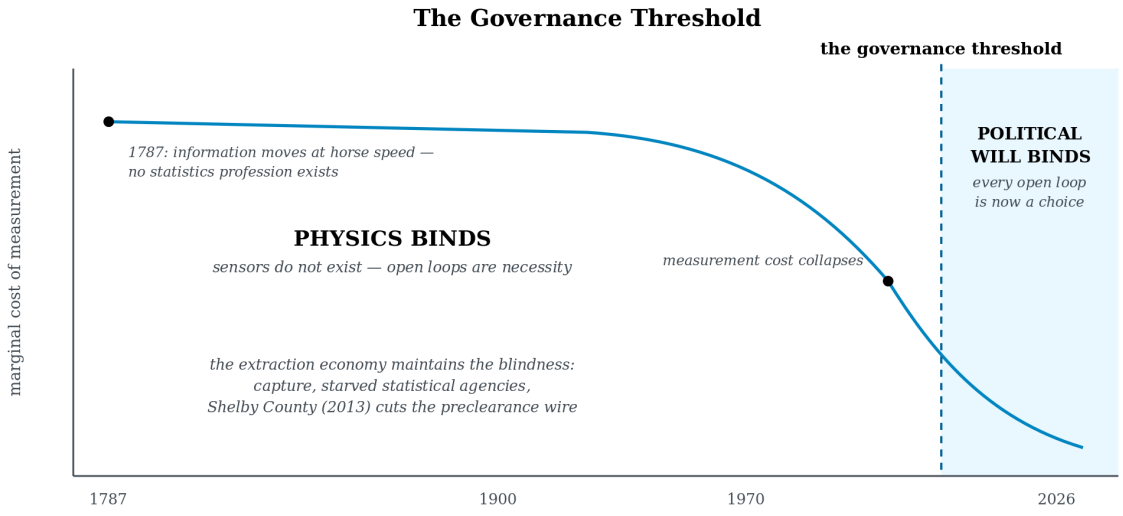
The pattern deserves a precise name: maintained blindness, not original blindness. The founders built open-loop government because sensors did not exist. The extraction economy preserved open-loop government because unmeasured drift benefits incumbents.

The Governance Threshold

Every threshold in the Stellaris Framework marks the moment a constraint changes owners — the moment physics hands the limiting factor to politics, or scarcity hands the limiting factor to distribution. The abundance economy rests on a collapse in the marginal cost of three inputs: energy, computation, and measurement. The third collapse carries the constitutional consequence.

Closed-loop governance was technically impossible in 1787 and technically trivial now. For the first time, the binding constraint on feedback belongs to political will rather than physics.

Call this the governance threshold. Before the crossing, open-loop institutions needed no defense — no alternative existed. After the crossing, every open loop survives as a choice, and the choice carries beneficiaries. An institution that stays blind after the governance threshold stays blind because someone profits from the blindness. The threshold converts a technical condition into a political fact, and political facts can change.



Closed-loop governance: technically impossible in 1787, technically trivial now.

Designing the Closed-Loop State

One rule governs the design: match loop speed to decision type. Fast loops for operations. Slow loops for rights. No open loops anywhere.

Fast loops belong to operations. Agencies should run on metric-triggered mechanisms: reference values written into statute, sensors reporting in public, corrections firing automatically when measurements cross defined lines. Sunset clauses force a reauthorization loop where none exists. Permitting, procurement, and benefit delivery should correct within quarters, on the Federal Reserve model, not within decades.

Slow loops belong to rights — and the slowness must survive by design, not accident. A right adjustable by any temporary majority ceases to function as a right. A right correctable by no one ossifies into whatever five justices say. Supermajority requirements, staggered institutional turnover, and long amendment cycles dampen oscillation without cutting the wire. Deliberate slowness differs from blindness: the loop still closes, just on a generational clock.

Then the new element: constitutional rights for citizens to benefit from the abundance economy. Here the design detail decides everything. A positive right enforced through litigation stays open-loop. South Africa's constitution promises housing and healthcare; courts acknowledge the promises; delivery still fails, because judges make poor actuators. The working model sits in Alaska. The Permanent Fund dividend structures a benefit as a self-executing mechanism: surplus flows in, a formula computes, checks go out, and every citizen becomes a sensor on the fund's management. No lawsuit required. Draft abundance rights as dividends, automatic triggers, and formula-driven transfers — never as bare justiciable claims. A right that pays out by formula closes the loop the right depends on. A right that requires a courtroom inherits every pathology the design set out to cure.

One clause must anchor the whole package: sensor direction. A government instrumented to measure outcomes can also measure citizens. The constitution must deliberately point the

sensors — transparency obligations run from government to citizen, privacy protections run the reverse. Without that clause, the closed-loop state becomes the surveillance state with better branding.

Failure Modes

Feedback loops fail in three ways, and the constitution should anticipate all three.

The comparator serves as the political organ. Whoever sets the reference values — what counts as abundance, what threshold triggers the dividend, what metric defines success — holds the real power. That fight never ends, and the design should stage the fight in the open: reference values set by legislation, in public, on a slow loop of their own.

Fast loops oscillate. A system corrected too quickly overshoots, reverses, and overshoots again. The Madisonian system's sluggishness sometimes dampens destructive oscillation, and the new design should preserve that damping where stakes run high.

Capture inverts the loop. A fast loop tuned to the wrong reference value corrects toward the wrong target with perfect efficiency. Regulatory capture already demonstrates the mechanism. Closed-loop government raises the stakes of capture precisely because the machinery works.

The Blueprint Moment

New institutional orders take shape before the window opens and take hold during crisis resolution — 1787, 1865, 1933 through 1945. Madison arrived at Philadelphia with the Virginia Plan already written. The Saeculum resolves when Millennials, a Hero generation, builds replacement institutions after the old order's authority collapses, guided by Nomads, GenX leaders who reached maturity during the crisis and now hold the senior posts of command, and the builders reach for whatever blueprint sits ready.

The current saeculum moves through resolution now. The extraction economy defends open loops that no longer have a technical excuse. The abundance economy supplies the sensors, the computation, and the surplus to close every loop in the system and pay citizens a share of the proceeds. Closed-loop government with formula-based abundance rights stands as a blueprint, not a slogan.

The window will open. The only question: will defenders of failed institutions prevail, or will GenX and Millennials implement a new blueprint for citizens?